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THE SUSTAINABLE AND PARTICIPATORY CITY: A CHALLENGING CONCEPT!

Contents

Abstract
Sustainability and participation have become two priorities of urban policies. They are usually considered perfectly synergistic, but they are not. This chapter aims to disentangle the imbroglio of sustainability coupled with participatory processes in the theory and practice of urban planning and development. To do so, it reflects upon empirical observations in the field of public policies in France and Germany as well as on some cases on both sides of the Rhine. Finally, this chapter describes and analyses policies and governance instruments intended to involve citizens in sustainable decision-making in urban areas of France and Germany.

Keywords
France – Germany – public participation – sustainable urban development – urban planning – Local Agenda 21

1 Introduction

Chapter 23 of Agenda 21 states that the effective implementation of sustainable development can only succeed through the commitment and genuine participation of all social groups (UN 1992, Rio Summit). Indeed, everyone concerned with sustainability issues should be involved in decision making (Mancebo 2017; Kanning 2013: 37). From a strategic perspective, affected persons possess values, experience and knowledge beyond the reach of experts or elected representatives ('tacit knowledge'), which may prove essential for effective sustainability decision making (Fischer 2000). These two complementary standpoints underline that sustainability resonates strongly with the notion of participation (Klinsky/Golub 2016). Scholars have identified two main obstacles:

> First, the difficulty of including all the actors (regional and local authorities, non-market institutions, NGOs, private companies, local storekeepers, unions, landowners, etc.) (Brenman/Sanchez 2012).

> Second, a lack of legitimacy (Lang et al. 2012). When trying to generate knowledge through collective action, the process and its outcomes often interfere with legitimised procedures and official policies (Scholz 2011).

The participation ladder concept, which was developed in the USA as early as the end of the 1960s (Arnstein 1969), classifies participation approaches according to the extent of citizens' decision-making power or the 'intensity of participation'. It has been adapted for urban development purposes, among other things. Assessments of participation processes may be based on it (e.g. Bischoff/Selle/Sinning 2006; see Figure 1).

Goal	Characterisation	Promise to the public
Empowerment	To place final decision-making in the hands of the public	We will implement what you decide.
Collaboration	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.
Involvement	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.
Consultation	To obtain public feedback on analysis, alternatives and/or decisions	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.
Information	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions	We will keep you informed.

Figure 1: Spectrum of participation / Source: changed according to: IAP2 2018, (c) International Association for Public Participation https://www.iap2.org/mpage/Home (23.02.2022); Kanning 2018: 21

To discuss the sustainability of urban policies, plans and programmes, we first must find out which sustainability strategy the initiatives are striving for: efficiency (improving the input-output ratio), consistency (qualitatively transforming industrial

material flows), and/or sufficiency (changing consumption patterns and resource-saving lifestyles) (Behrendt/Göll/Korte 2018; Schneidewind/Zahrnt 2013). These are not alternative strategies, only the triad of efficiency, sufficiency and consistency leads to sustainable development (von Gleich/Hofmeister/Huber 1999; Kanning 2013: 34 et seq.). In any case, sustainability is a dynamic and context-specific process that is constantly contested rather than a static condition to be generally defined (Growe/Freytag 2019).

It is crucial to understand how the population and institutions respond to change in order to develop new forms of participatory governance for sustainability: Who is initiating the participatory processes, and which groups of actors are addressed and becoming involved, or in other words what governance arrangements are built? Which intensity of participation (Figure 1) is achieved? Which types of strategies are followed (efficiency, consistency, or sufficiency)?

To answer these central questions, a comparative approach is chosen. First, we describe the development of policies for urban sustainability in France and Germany, using an analytical diachronic approach starting in the 1970s. Then, we tackle the progress of participatory policies for sustainability in both countries. Finally, we combine the two dimensions, and compare the results in order to identify trends and patterns.

2 Sustainability in urban planning and development

2.1 The French Approach

Over the last 30 years, cities have become the very places where environmental awareness has been transformed into in-depth urban strategies and governance (Béal 2011). But although environmental issues achieved a breakthrough, their translation into specific initiatives took time. Conflicting perspectives and significant discrepancies between antagonistic types of actions have dramatically slowed the efforts. A brief history of the French regulatory framework and cultural background appears necessary for understanding these difficulties.

The post-war boom – called *Trentes Glorieuses* ('Glorious Thirties') in France – was characterised by a sheer influx of people migrating to work in the large cities. This generated a massive housing crisis, the response to which was the authoritarian development of high-density housing in the 1950s and 1960s. This provided clean and comfortable housing. Yet, the developments were cut off from the traditional urban fabric. A growing sense of dehumanisation developed in such areas, crystallising in the first demands for a better quality of life that resulted in the early ecological movements (Mancebo 2010).

The first Ministry of Environment was established in 1971. More precisely, its denomination was *Ministère de la protection de la nature et de l'environnement* (Ministry of Nature Protection and Environment). Initially, its sphere of responsibility was not defined. Thus, diverse competences were hived off from other ministries and

transferred to this new one, including large sectors like urban regeneration or urban social policy (Lacroix/Zaccai 2010). This first ministry was fundamentally a hotchpotch. Throughout the two subsequent decades, it gained consistency, reinforced its competences and consolidated its administration, as a result of two factors:

> First, an internal one, as the rise in environmental concerns among the population put this matter on the political agenda.

> Second, an external one, as European directives on environmental issues must be incorporated into national laws and regulations – for example the Habitats directive using the Natura 2000 programme, or more recently the directive on ambient air quality and cleaner air for Europe, for example (Charvolin 2003). In 1995, all these synergistic initiatives were embodied in a general law, which established guiding principles in environmental policies: the *loi relative au renforcement de la protection de l'environnement* (Law on the Strengthening of Environmental Protection) also known as *loi Barnier* (Barnier Law). Since then, this act has become the cornerstone of French law and decision making on environmental issues.

The first institutional instance of the phrase 'sustainable development' was precisely in *loi Barnier*, where it was defined as an overarching guiding objective of environmental policies. It was not before 2002 that the term appeared in the name of the ministry, which became the *Ministère de l'écologie et du développement durable* (Ministry of Ecology and Sustainable Development). As far as cities are concerned, urban sustainability then became a touchy issue, since it was within the field of competences of two different ministries whose priorities were often opposed and competing: the *Ministère de l'écologie* (sustainability priorities) on the one hand, and the very influential *Ministère de l'aménagement du territoire, du logement, des infrastructures et des transports* (Ministry of Spatial Planning, Housing, Infrastructures and Transport) (urban priorities) on the other hand. It was only in 2007 that these two ministries merged into one huge ministry. Simultaneously, there was a founding event called *Grenelle de l'environnement* (Grenelle Environment Forum).

The *Grenelle de l'environnement* was a round table that involved representatives of all the members of society: local and regional authorities, professional organisations, labour unions, NGOs and experts. It took place in 2007 and was initiated by the French government, who made the commitment to endorse the outcomes in long-term decisions regarding the environment and sustainability (Boy/Brugidou/Denord et al. 2012). A first programming bill on its implementation – called *Grenelle 1* – was smoothly enacted in 2009. In 2010, a second bill that aimed to provide a complementary second bill level – called *Grenelle 2* – was also enacted.

The *Grenelle de l'environnement* focused on how public policies could manage sound urban transitions to sustainability (Vie publique, la rédaction 2019). Two out of six environmental key priorities designed during this event directly concerned urban sustainability: 'construction and urban development' and 'energy and climate'. The latter was oriented towards the energy performance of buildings, for example, all cities with more than 50,000 inhabitants were required to implement a *Plan Climat*

Local (Local Climate Plan) before 2012. As a matter of fact, the *Grenelle* set objectives that had to be included within all the planning documents at whatever scale – among them the regional *Schéma de cohérence territoriale* (SCoT – Scheme for Territorial Coherence), the *Plan local d'urbanisme* (PLU – Local Urban Plan) and *Cartes communales* (Municipal Land Ownership Maps). The compliance of SCoT and PLU with *Grenelle*'s provisions allows density targets to be exceeded by more than 20% even in protected areas, provided that the new buildings are characterised by good energy performance (Némoz 2011).

In general, the *Plan ville durable* (Sustainable City Plan) established in the aftermath of the *Grenelle* aims to foster the emergence of a new way to design and build urban areas. *ÉcoCité* and *ÉcoQuartier* programmes are two key instruments for this new approach. The scale of *ÉcoCité* actions is the city as a whole, more specifically the *Villes nouvelles* (New Towns) developed in the 1960s and 70s. On a far more local scale, *ÉcoQuartier* initiatives aim to catalyse the creation and development of eco-districts within cities. The *Programme national de rénovation urbaine* (PNRU – National Urban Renewal Programme) evolved so that every new renewal scheme became part of the *ÉcoQuartier* programme after 2009.

It can be stated that sustainable cities have enjoyed new policy tools following the *Grenelle*. Thus, today most cities – whatever their size – enact their transition to sustainability along four tracks: eco-districts, wastelands and brownfield redevelopment, building energy performance and mobility, and the Local Agenda 21 centred on quality of life and nature.

2.2 The German approach

German municipalities have planning sovereignty over their territories. The federal level may only influence urban development through laws on urban planning and with model projects or support programmes. The federal states may influence urban development, e.g. with building regulations. Because the implementation of sustainable development is a voluntary task of municipalities, approaches vary widely. For a brief overview, we distinguish between three modes of governance: (1) formal instruments of urban planning, (2) informal approaches to (integrated) urban development, (3) Local Agenda 21 (LA 21) and civil society processes.

(1) As early as 1960, the *Bundesbaugesetz* (BBauG – Federal Building Act) was adopted, with a few elements of sustainable urban development. This has institutionalised two-tiered land-use planning as a local competence. The act distinguished interior from exterior development and its article 35 allowed only so-called privileged land uses (agriculture, forestry, horticulture, fisheries, utilities, energy) to build in exterior areas, thus preventing urban sprawl but not land take. Environmental regulations from the EU and national levels were slowly incorporated in the act and its successor, the *Baugesetzbuch* (BauGB – Federal Building Code). Sustainable development was legally anchored as a guiding principle of urban planning in the code in 1998, urban sustainability criteria were listed in its article 1 in 2004, but no fundamental substantial or instrumental changes were made (Wolfram 2002; Weber 2004; Scholich

2008; Hofmeister 2014). The focus continued to be on the environmental dimension instead of transformation (Wolfram 2002), as sustainability was introduced when transposing EU directives on the environment.

Formal land-use planning only controls the type and intensity of land use. Thus, the first national sustainability strategy (Bundesregierung 2002) introduced the '30 ha target' for sustainable urban development to reduce daily land take for settlement and transport from 129 ha in 2000 to 30 ha in 2020. Despite some regional successes, land take in 2018 was still at about 56 ha per day (Destatis – Statistisches Bundesamt 2020) and compact greenfield development has recently reappeared (Altrock/Krüger 2019). Material and energy flows can at best be indirectly controlled through formal planning (Kanning 2005).

(2) Informal local approaches to integrated sustainable urban development have increased since the Leipzig Charter on Sustainable European Cities (European Ministers for Urban Development 2007). They have a much wider scope than formal urban planning.

As illustrated in the 'sustainability triangle' or the '3-pillar model', the Leipzig Charter perceives the three dimensions of economic prosperity, social balance and a healthy environment as equally significant aims which must be balanced. Therefore, nature conservation actors in particular tend to perceive sustainable development as a drawback or dilution of what has already been achieved by environmental policies since the 1970s. Academics, however, stress that the ecological dimension represents the foundation for economic and social development that must be preserved for future generations in the long term (WBGU 2014). Overall, the sustainability triangle and the associated thinking seem to have led to a dead end (SRU 2002; Kanning 2013: 27).

The Advisory Council on Global Change (WBGU 2011) set a milestone, recommended a 'Great Social Transformation' and triggered a new substantial discussion on the sustainability model, especially at the federal level and among academics. Important functions were attributed to urban and regional planning.

Cities regained relevance internationally in the Agenda 2030 (UN 2015), which includes sustainable development goal (SDG) 11 Sustainable Cities and Communities, the New Urban Agenda (UN 2017), adopted during the HABITAT III World Summit, and the Urban Agenda (EU 2016). SDG 11 goes far beyond the '30 ha target'. Some pioneering cities, such as Dresden, Hamburg and Hanover, have set out to adopt the various SDGs. However, cities pick easily achievable targets from among the 63 defined in the second national strategy (Bundesregierung 2017), without considering the strategy as such (Dähner/Slupina/Klingholz 2017).

In 2019, federal urban development funding was restructured to promote 'growth and sustainable renewal'. This term is characterised by a dilemma: although more innovative approaches at the local and particularly neighbourhood levels also promote more sustainable economies (e.g. the resource-optimised development of commercial areas in Karlsruhe), the concept of growth is unchallenged and socio-ecological transformation is unsupported.

Efficiency and consistency strategies dominate, e. g. energy efficiency in buildings, renewable energies, environmentally sound mobility. There is, however, a lack of sufficiency strategies, except for sharing approaches, e. g. in housing (Sinning/Spars 2018).

(3) In parallel to the integrated urban development processes, Local Agenda 21 (LA 21) processes have mostly been separately set up since the early 1990s. German cities responded early to the Agenda 21 call and have turned LA 21 into a broad participatory movement with a sufficiency understanding of sustainability. In 2009, there were still some 2,600 LA 21 processes in Germany (Kirst/Trockel/Heinrichs 2014: 552). After the early 2000s, however, the number of new LA 21 initiatives declined and existing ones began to expire. For an overview of the development phases, see Heinrich Böll Stiftung (2018).

In addition, numerous 'pioneers of change' or bottom-up processes initiated by civil society are developing new lifestyles and economic activities that consume less and share goods, e. g. within the Transition Town Initiative, urban gardening projects, repair cafés and loan shops. They are leaving behind the growth orientation of urban planning (Hülz/Mayer/Sondermann 2020). However, most of them are connected neither to municipal urban development strategies nor established LA 21.

3 Participation in sustainable urban development and planning

3.1 The French approach

The *Grenelle de l'environnemen*t is considered as a participatory turning point in public decision making (Livet 2007). It stipulates that sustainability policies and actions must include participatory procedures. During *Grenelle's* round of discussions, a task force was even named *Construire une démocratie écologique: institutions et gouvernance*s ('Building an ecological democracy: institutions and governance'). Its final report included the following statement: '*Les électeurs souhaitent que les opportunités de faire valoir leur point de vue ne se limitent pas aux échéances électorales, et il devient nécessaire de mieux combiner démocratie participative et démocratie représentative*.' ('Voters want opportunities to express their views beyond electoral events, and there is a need to better combine participatory and representative democracy.')

But participatory concerns did not begin with the *Grenelle de l'environnement*. This event has rather been a factor in the consolidation of many existing procedures and tools. In fact, participatory procedures developed incrementally and haphazardly in the 1970s and later, in response to emerging conflicts concerning the development of large-scale facilities. To deal with this type of conflict a commission was created by *loi Barnier* in 1995: the *Commission nationale du débat public* (National Commission for Public Debate), which, by the way, is now used as a strong arm for the implementation of *Grenelle*'s policies. Well before that but in the same vein, in 1983 *loi Bouchardeau* (Bouchardeau Act) stipulated that any *étude d'impact sur l'environnement*

(environmental impact assessment) had to include a public consultation – in the form of an *enquête publique* (public enquiry) – to ensure that public interests and values are addressed effectively.

Generally speaking, the practical implementation of an urban transition to sustainability policies takes the form of technical devices, the most iconic initiatives being passive energy houses, zero energy buildings, smart grids that manage a city's energy demand (Dujin/Moussaoui/Mordet et al. 2011), and real time optimisation of street traffic (Sokoloff 2016). These very technical approaches are favoured at the expense of other aspects of urban sustainability such as environmental justice, living conditions or landscape diversity. For example, the PNRU drastically transformed urban public action, but not in the sense of more interactive and transferal initiatives. In this sense, it can be seen as a regressive mechanism as far as urban sustainability is concerned (Epstein 2011). There has in fact long been an impervious divide in French urban policies between participatory initiatives in the realm of what is called *Politique de la ville* (Town Policy) – which has no relation to urban planning or design but is rather, in a nutshell, concerned with social issues in housing developments –, and top-down initiatives – mainly technology-oriented – in the realm of ecology and environmental policies. As a result of this cultural background, urban project stakeholders are still struggling to combine technical with participatory dimensions in spite of the *Grenelle* legal framework (Theys 2002). In many cases, initiatives are limited to the planning of a few green areas as if it were sufficient to display 'green' to become suddenly sustainable, and the involvement of local residents in the project is limited to information meetings pompously named *réunions de concertation* (consultation meetings). Frequently – as far as urban sustainability is concerned – effective participation cannot take place based simply on the will and skills of the administration, architects, planners and surveyors (Mancebo 2020). Such a process needs time, quite different from the frenetic timeline and knee-jerk reactions to any opposition that elected officials and developers impose on urban policies (the next election, compliance with construction deadlines etc.).

Let us take the case of the city of Nantes, an active French city of 303,382 inhabitants with an above-average rate of growth. Nantes is developing an official programme to make transition to sustainability inherently participatory (Comeliau 2007). It is focusing on regenerating large parts of the industrial and port wastelands. But in fact, this programme is limited in terms of consultation (EDD 2007). Behind the scenes, significant choices were made by the municipality, which then tried to gain inhabitants' acceptance by asking for their opinion on details. The humorous part of this is that spontaneous participatory initiatives were already seen in Nantes more than 30 years ago, without any encouragement from the municipality. *La Fournillière* – a former wasteland of more than 3 ha in the city of Nantes – was transformed into an unusually large area of urban farmland in the 1990s as the result of a conflictual bottom-up initiative, which ended in co-management between the neighbourhood and the municipality (Pasquier 2004). More than 70 illegal urban gardeners were squatting on this wasteland when Nantes municipality decided to develop a park there in the 1990s. Something unusual then happened. The gardeners spontaneously united their forces and organised to impose their views upon the municipality. They claimed that they wanted to be decision-making partners in the project. At the end of a long process of

negotiations – and against all odds – the gardeners' alternative project was chosen, and the municipal proposal abandoned. The new project envisioned a park organised around the existing gardens, which then formed islets or patches with paths for walkers and runners entwining and connecting them. At the very centre of the park, a venue was placed to introduce visitors to waste recycling in urban gardening. This case symbolises the potential of participatory approaches to planning procedures outside any official procedure, i. e., bringing everyone to the table so that citizens understand that urban affairs are fundamentally their affairs.

3.2 The German approach

Participation has a long tradition in German urban planning and development. As early as 1960, the Federal Building Act made it possible for the affected population to obtain information and comment on land-use plan drafts. Today, participation as shaped by the Århus Convention is an integral part of formal and informal local planning and a main feature of a planning culture based on cooperation and self-governance (Healey 1992).

From the 1970s, environmental awareness and participation was strengthened by strong grassroots movements campaigning against nuclear energy, for better air and water quality especially in industrialised urban regions, and for nature conservation. This led to the foundation of municipal departments and state ministries for the environment as well as the Green Party (Grober 2010) in the 1980s. A federal ministry for the environment was founded later (after the Chernobyl communication disaster) to integrate dispersed competences.

Turning briefly to participation processes in the various modes of governance – (1) formal urban planning, (2) informal urban development, and (3) local agenda processes.

(1) Formal participation is rarely more than consultation. Rare exceptions include the internationally acknowledged neighbourhoods of *Tübingen-Französisches Viertel* or *Freiburg-Vauban*, where a collaborative approach (building groups) was implemented by formal urban planning. Federal ministries headed by conservative politicians have even tried to change the law in order to restrict the participation guaranteed by the Århus Convention, allegedly to accelerate planning and approval procedures.

(2) Informal urban development processes usually choose more sophisticated participation formats.

The city of Karlsruhe serves as a good example of civil society involvement. Like Nantes, it is growing at an above-average rate and, with a population of around 310,000, it is one of the medium-sized large cities in Germany. Unlike Nantes, however, it has already undergone socio-economic transformation by developing from a production site to an innovative research and development site. Based on a policy of systematic citizen participation (Stadt Karlsruhe 2012a), various formats enable cooperation, e. g. citizen idea competitions, future conferences, planning workshops.

Processes range from the scale of the overall city to the neighbourhood level and include spatial visions for urban planning as well as sectoral policies such as traffic development.

Karlsruhe drew up the interdepartmental *Karlsruhe Masterplan 2015* for urban development in an extensive two-year cooperative process. Based on a future conference, the master plan was extended to the *Integriertes Stadtentwicklungskonzept Karlsruhe 2020* (Integrated Urban Development Strategy Karlsruhe 2020; Stadt Karlsruhe 2007; 2012b) in a cooperative process with five future forums, open to the public. Citizens, local government and the administration thus jointly developed an orientation framework for decision making that provides a long-term perspective. It integrates economic, social, cultural, urban developmental, environmental and civil society action (ibid: 8).

(3) LA 21 features cooperative approaches and more recent Agenda processes even include more intensive public participation. Numerous bottom-up movements are developing in civil society in parallel, attempting to establish new lifestyles and economic activities.

The emerging transformative science (WBGU 2011; Schneidewind/Singer-Brodowski 2013) is adding to the various participatory processes that exist in urban planning and development, promoted by federal government policy: living labs are currently highly praised as a 'new' format for transformation towards sustainability, especially at the local level.

Participation is a core feature in living labs (Defila/Di Giulio 2018: 40). Instruments and methods from participatory planning processes can largely be transferred or adapted (Eckart/Ley/Häußler et al. 2018: 131 et seq.; Kanning 2018). However, planning focuses on the relationship between the state/public sector and civil society, whereas living labs concentrate on the relationship between academics and practitioners (including urban planners) (Eckart/Ley/Häußler et al. 2018: 105; Arnold/Piontek 2018; Beecroft/Trenks/Rhodius et al. 2018; Seebacher/Alcántara/Quint 2018). The latter contribute local knowledge in particular (Kanning/Richter-Harm/Scurrell et al. 2021). Ideally, 'change agents' should be among the practitioners (Grin/Rotmans/Schot 2010).

The living lab complex established by the Karlsruhe Institute of Technology (KIT) in *Karlsruhe-Oststadt* (http://www.quartierzukunft.de) has shaped the scientific development of this methodology. A 'five-step model' (Brinkmann/Bergmann/Huang-Lachmann et al. 2015; Stauffacher/Flüeler/Krütli 2008) provides the conceptual basis and has been further developed for living labs. It builds upon the participation ladder presented in Figure 1. Participation is perceived as initiating a transformation towards sustainability by aiming to achieve empowerment to the highest degree possible. Local actors shall be empowered to act sustainably, which includes a change from non-sustainable lifestyles and consumption habits towards sufficiency (Kopfmüller/Brandl/Jörissen et al. 2001). This living lab model thus goes way beyond what is customary in participation in urban development, both in substance and in terms of process. However, it is not interlinked with other urban development processes in Karlsruhe.

In contrast, the living lab 'Go Karlsruhe' was better interlinked with actors from urban planning and other urban development processes. However, the focus here was more on change in the mobility sector only, developing and testing new participatory approaches to promote walking (Häußler/Blaszczyk/Eckart et al. 2019).

4 Comparison and conclusions

Based on four questions, it is possible to compare the types of governance arrangements that address urban sustainability through a participatory approach in France and Germany:

Who initiates the process?
In France, we predominantly find a top-down approach, whereas in Germany there are more bottom-up approaches. Besides, cities from both countries actively participate as NGOs in the world summits and habitat conferences or have organised conferences; they are well prepared and often return with new impulses. They have proposed and influenced new support programmes or model projects set up by ministries to initiate processes. The French national level mostly initiates the process, based on laws that have set milestones since 1995. Municipalities and their corporations may act as informal initiators when sustainability is high on the agenda of an active and well-networked mayor, frequently merely for electoral reasons. In contrast, in Germany local groups and initiatives have strongly influenced sustainability processes and policies in quite different ways. The federal level disseminates best practice by financing model projects and initiating innovation with support programmes. A number of cities have developed the know-how to intensively participate in the programmes, while others are lacking human and financial resources. Recently, some federal states have also put programmes in place to support new forms of participation like living labs. Academics as well as developers have entered the arena as initiating actors, sometimes independently of the municipality, sometimes in cooperation. Nevertheless, bottom-up approaches also exist in France and have increased in number over the last ten years. They are usually the outcome of conflicts concerning infrastructure proposals or landscape and environmental quality issues. In these cases, environmental NGOs, landowners or neighbourhood associations are usually the initiators of the process.

Who participates?
In Germany, citizen initiatives are the most important participating actors besides individual, mostly better educated citizens. Sometimes they are formally organised in building groups. Living labs try to reach a representative sample of the population that also includes ordinary people. The situation is a bit different in France, where the main actors in participatory procedures are, on the one hand, local authorities and representatives from the national and regional government that generally are the formal initiators, and, on the other hand, local and environmental NGOs as well as local business, landowners and residents' associations. Academics and urban practitioners are usually also involved. Finally, there are quite a few citizen grassroots initiatives, and when they occur, it generally is on a NIMBY basis, or at least arises out of conflict.

What intensity of participation is achieved?

In both countries, consultation is the minimum requirement, especially in formal processes with an environmental impact assessment or a strategic environmental assessment. Cooperative approaches have been undertaken in France in rare cases, but generally the public is just informed – although the process is formally called *concertation* (dialogue). In Germany, a number of local showcase projects have applied cooperative approaches to create not only acceptance among citizens but also a sense of ownership. These showcases have sometimes impacted formal standards in the same municipality by intensifying participation, but implementation is strongly determined by growth and spatial constraints and is locally contingent (Growe/Freytag 2019). Both showcases and living labs are sometimes isolated or poorly linked to established urban development processes. Some leading cities or city regions have established participation by starting with an integrated urban development strategy, continuing with planning workshops and participatory master plans, and ending with binding land-use plans for neighbourhoods that transfer key points into regulations. Despite very important advances in the matter of participation in the aftermath of the *Grenelle de l'environnement*, public actors and local authorities remain reluctant to engage in participatory governance in France. The relative failure of sustainability policies to meet their targets is related to neglect of the participatory scope. Seen as unfair and technocratic, such policies are not supported in the public arena. For instance, the focus put by French local authorities and developers on the energy performance of buildings leads to the development of showcase buildings and utilities to the detriment of more holistic approaches, such as active land management and transformation of the urban fabric (Mancebo 2020). In fact, describing a city as sustainable only by counting the number of passive buildings, the total length of bike lanes, the surface of vegetated roofs or the percentage of recycled waste is absurd and leaves no room for people to get involved in the decision-making process (Ascher 2008; Elliot 2006). An unintended effect of this situation is that local knowledge is commonly underrepresented in final decisions.

Which type of sustainability strategy?

In France and Germany, there is a predominance of efficiency strategies. Sustainability has become a guiding principle of urban planning in both countries' building codes but without mentioning the type of strategy approach. France has institutionalised completely new urban planning instruments that claim to foster sustainability, whereas Germany has attempted to slowly and incrementally make existing urban planning instruments more sustainable. Especially the national level in both countries strongly supports technology-centred action like low energy housing and insulation. The municipalities react by redeveloping derelict land e.g. for spin-offs in these fields of technology and helping owners to take part in the programmes. In addition to renewable energies, consistency-oriented projects include, for example, building groups providing shops for local retail and services, as have been intensively described in the literature. It is striking that we find the largest number of these in prosperous R&D-focused university cities in Baden-Württemberg. Good examples of sufficiency approaches are rare (e.g. sharing initiatives). In any case, sustainability strategies should also think the city as a whole, taking into account uses and the everyday life issues of its inhabitants, and including them from scratch in the design and planning of their city. The effectiveness of sustainability policies depends largely on collective ownership.

What does urban sustainability mean and how can it be achieved at the local level, which seems to be the more adequate scale as the cases of *Karlsruhe-Oststadt* and the Nantes harbour area show? Living labs in particular could be an important tool to promote such transformation towards sustainability. Participation in living labs can learn from established participation in urban development and planning and vice-versa. Living labs offer an experimental space for a more sophisticated transformation towards sustainability beyond classical growth strategies and may include, for example, sufficiency strategies. But there are still many open questions regarding the effectiveness and legitimacy of cooperation in living labs: How is innovation jointly developed by actors in individual projects transferred to local administrative processes in the long term? Can selected actors develop solutions that can be democratically implemented? How can role conflicts be overcome? How can results from these labs become binding without formal administrative procedures?

In both countries, such living labs could prove crucial to determine what a good environment for the affected communities is, an essential issue for involving people in the decision-making process: an environment in which the improvement of environmental conditions *stricto sensu* (water quality, air, biodiversity, prudent use of resources, land and energy, etc.) will lead to improved living conditions; one in which technical devices and ecological processes will lead to new lifestyles. This means adopting more organic, collaborative and transforming forms of governance, which can be coined as participatory governance.

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